



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,911	11/05/2003	David R. Hall	66.0040	2910
26932	7590	03/18/2005	EXAMINER	
JEFFREY E. DALY GRANT PRIDECO, L.P. 400 N. SAM HOUSTON PARKWAY EAST SUITE 900 HOUSTON, TX 77060			TUGBANG, ANTHONY D	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,911

Applicant(s)

HALL ET AL.

Examiner

A. Dexter Tugbang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 16 and 19-28 is/are rejected.
- 7) ☒ Claim(s) 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/1/04, 4/13/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the invention of Group II, Claims 15-28 in the reply filed on 12/15/04 is acknowledged.
2. Claims 1-14 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/15/04.
3. With respect to the Election of Species requirement in the last Office Action (Restriction Requirement, dated 11/30/04), the portion of the requirement directed to different Species has been withdrawn. There would be no burdensome search to examine all of Claims 15-28 as follows.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because the content appears to be greater than 150 words in length. Correction is required. See MPEP § 608.01(b).

Art Unit: 3729

Claim Objections

6. Claims 16 and 18 are objected to because of the following informalities.

In Claim 16, the term “ther” (line 1) should be recited as --the--.

In Claim 18, the phrase of “the terminal end” (lines 3-4) should be recited as --a terminal end--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 15, 16 and 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhein-Knudsen et al 5,278,550 in view of Eastlund et al 4,716,960.

Regarding Claim(s) 15 and 16, Rhein-Knudsen discloses a downhole tool comprising: a coaxial cable connector comprising a tube (hollow mandrel 152 in Fig. 2A) and a generally coaxial center conductor (either one of leads 62, 64 or cable 620), the tube having a first end (smaller diameter region under coil 59) and a second end (larger diameter region above coil 59), the head in electrical communication with an inductive transformer (coil 59), the second end in electrical communication with an internal diameter of a conductive tube 49, the coaxial center conductor passing through the tube 152, electrically insulated from the tube and in electrical communication with a coil 50 in the inductive transformer 59 and a conductive core of the cable.

Art Unit: 3729

Regarding Claim(s) 19, Rhein-Knudsen teaches that the head form a saddle (smaller diameter region) that conforms to an outer housing 99 of the inductive transformer.

Regarding Claim(s) 21, the head of Rhein-Knudsen has an “outer flat sidewall” (walls that hold feed throughs 56, 58 or the flat wall that mates with member 196).

Regarding Claim(s) 23, the head of Rhein-Knudsen includes an “open ended protuberance” (upper portion of 152) in which the center conductor passes 620 through.

Regarding Claim(s) 24 and 25, the connector tube includes grooves (in member 99) that is adapted to house a sealing mechanism of o-rings.

Regarding Claim(s) 26 and 27, Rhein-Knudsen suggests that the connector is made of a metal of titanium (see col. 6, lines 5-7).

Regarding Claim(s) 15, Rhein-Knudsen does not teach a coaxial cable, or that anyone of the cables are of a coaxial cable type.

Eastlund teaches that downhole tools with a coaxial cable connector can have cables, or electrical conductors, that are of a “coaxial cable” type (see Fig. 10) for the benefits of providing an electrical conductor with tensional strength and low resistance (see col. 2, lines 16-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the cable structure of Rhein-Knudsen by utilizing at least one of the cables as a “coaxial cable”, as taught by Eastlund, to provide the benefits of an electrical conductor with tensional strength and low resistance.

Regarding Claim(s) 20 and 22, Rhein-Knudsen teaches mechanical connections with a fastener 42 between the saddle and the outer housing of the transformer, and between the terminal end of the coil and the coaxial cable connector outer flat sidewall. To use a “welded”

Art Unit: 3729

connection for each can be achieved as a desired result through routine experimentation. *In re Aller*, 220, F.2d 454, 105 USPQ 233, 235 (CCPA 1955). Therefore, the limitations drawn to the saddle being welded to the transformer and the terminal end of the coil being welded to the outer flat sidewall would have been an obvious improvement over Rhein-Knudsen through routine experimentation.

Regarding Claim(s) 28, it would have been an obvious matter of design choice to choose any desired metal, since the applicant(s) have not disclosed that the claimed different types of steels, solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the composition of metal taught by Rhein-Knudsen or Eastlund.

Allowable Subject Matter

9. Claims 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter.

With respect to Claim 17 as Claim 17 contains all of the limitations of Claim 15, the prior art does not teach any structure that can be read as the second end of the coaxial cable connector having a plurality of bulbous plant tabs extending from the tube.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

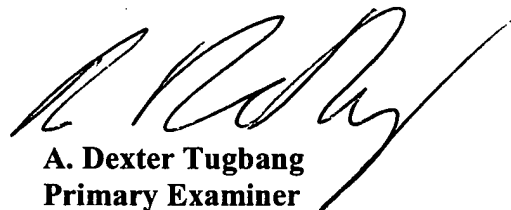
Art Unit: 3729

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570.

The examiner can normally be reached on Monday - Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

March 7, 2005